AMENDMENTS TO THE SPECIFICATION

Please delete paragraphs [0023], [0026], and [0027] of the Specification.

Please amend paragraphs [0024] and [0025] as shown following:

[0024] Figure ~~3~~ 2 is a graphical representation of a steady shear viscosity-shear rate curve for certain embodiments of a solution that comprises polymersomes.

[0025] Figure [[4]] 3 is a graphical representation of a storage modulus-frequency curve and loss modulus-frequency curve for certain embodiments of a solution that comprises polymersomes.

Please amend paragraph [0062] as shown following:

[0062] To make polymersomes, the sample solution was injected into deionized water under high shear using a homogenizer (Tekmar Tissumizer) at 20% output for 10 minutes to form a homogenized sample solution. Alternatively, homogenization also may be carried out using a bench-top vortex mixer. Depending on the concentration of the sample solution, the homogenized sample solution may be either clear or opaque. For example, when 0.8 ml of 20 mg/ml sample solution is injected into 5.35 ml deionized water, a turbid solution was observed. On the other hand, when 55 μl of a 20 mg/ml sample solution was injected into 6 ml deionized water, a clear solution is obtained. Next, the homogenized sample solution was transferred into dialysis bags (Spectra/Por membrane, MWCO 3500) and dialyzed for several days against deionized water in a 3.5-liter flask while changing the water several times a day to form a vesicle solution. After dialysis, the resulting vesicle solutions were analyzed using a Brookhaven Instruments 200-SM goniometer for dynamic light scattering ("DLS"), and a Nikon TE300 inverted stage microscope with epifluorescence filter cube for light microscopy ("LM") and fluorescent microscopy ("FM"). For visualization of polymersomes in the vesicle solution using FM, hydrophobic DiO (Dioctadecyloxacarbocyanine perchlorate) was added to the vesicle solution. Edge bright images were observed with fluorescent microscopy, which generally is accepted evidence of vesicle formation. ~~Figure 2 is a fluorescent microscopy image of the DSL results of the edge bright polymersomes where DiO was added as a fluorescent probe.~~

Please amend paragraph [0067] as shown following:

[0067] First, to determine the desired rheological properties of the polymersomes, the sediment in the vesicle solution was collected with a micropipette and transferred to the DSR.

Using the DSR, dynamic and steady state properties of the sediment were determined. To study the behavior of the sediment under steady shear, steady rate sweeps were performed that covered shear rates between 0.7 and 1000 s^{-1}. Results of the rate sweeps indicated that the sediment showed shear thinning behavior. Dynamic properties were used to separate storage modulus (G') and loss modulus (G'') of the sediment to obtain information about elastic and viscous behavior of the vesicle solution. A frequency sweep was carried out between 100 and 1 rad/second to investigate the dynamic rheological properties of the sediment. Figure ~~3~~ 2 graphically depicts the steady shear viscosity eta (Pa-s) as a function of shear rate (s^{-1}) of the vesicle solution. Figure [[4]] 3 graphically depicts G' (Pa) and G''(Pa) as a function of frequency (rad/sec).

Please amend paragraphs [0071] and [0072] as shown following:

[0071] First, a SEM experiment was carried out. A drop of the vesicle solution was placed on double-sided tape on a SEM sample mount. The drop was allowed to dry at room temperature for several hours. After drying, the SEM sample mount was placed in a VCR IBS/TM 200S Ion Beam Sputterer ("IBS"), and the surface of the dried drop of the vesicle solution was coated with 10-20 nm of Au. This sample was then analyzed with the SEM. SEM results indicated a very high conversion to polymersomes, and, therefore, a high yield of vesicular formation ~~as shown in Figure 5. While the SEM images in Figure 5 represent a vesicle solution that is not fixed, 2% osmium tetraoxide may be used to fix the vesicle solution prior to IBS.~~

[0072] For the TEM experiments, the vesicle solution was fixed using 2% osmium tetroxide as discussed above in Example 1. The fixed vesicle solution was centrifuged at 14,000 rpm for 45 minutes to form a pellet using an Eppendorf Centrifuge 5415 C. The pellet was then transferred into pure deionized water for 10 minutes. To replace the water with ethanol, the external environment was replaced with increasing concentrations of ethanol, starting with 50% followed by 70%, 80%, 95%, and finally pure ethanol for 10 minutes at each step. Finally, the pellet was embedded in Micro-Bed Resin (Electron Microscopy Sciences, PA). The pellet was infiltrated with 100% resin, 3 changes, 40 minutes each at room temperature, followed by a second infiltration with fresh resin overnight. Finally, the pellet was placed in embedding capsules filled with fresh resin and cured at about 50 to about 60°C for about 24 to about 48 hours. Thin sections (0.5 microns) are sectioned from the cured resin using a Leica Ultracut

UCT Microtom with a glass knife. Sections were collected with 200 mesh copper grids and analyzed with TEM. ~~Figure 6 displays an example of the thin sections of the polymersomes collected above.~~